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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,849	10/17/2003	Bill Grubba	506422-0059	9582

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EXAMINER

ADDIE, RAYMOND W

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/687,849	GRUBBA, BILL	
	<b>Examiner</b>	<b>Art Unit</b>	
	Raymond W. Addie	3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 1 is objected to because of the following informalities: The phrase "said shearing device"; should be --said blade--, to stay consistent with Applicant's amended claim language. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kieranen et al. # 6,227,761.

Kieranen et al. discloses a device (28) for placing an asphalt mixture or the like, on a surface said device adapted to be coupled with a prime mover (22) for pulling said device over said surface. Said device (28) comprising:

A framework (27, 44, 46) adapted to be pulled behind said prime mover (22), and further adapted to be coupled with said prime mover to accommodate floating vertical movement independent of said prime mover (22). See Col. 5, Ins. 49-65.

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A non-rigid connecting structure (26), in that the structure (26) can telescopically extend and retract; coupled with said framework and said prime mover.

A device, such as an auger (36), coupled with said framework for distributing said asphalt mixture over said surface.

A concave blade (20) capable of shearing asphalt, which is mounted on said frame work for forming a substantially planar asphalt surface after said asphalt mixture has been distributed over said surface.

A proximity control device (52, 54) mounted on said framework and coupled with said blade and being moveable in a vertical plane independent of said prime mover and in response to elevational changes in said surface.

At least one signal generator (278) associated with said proximity control device for Producing a signal indicative of the elevation of said surface.

At least one signal receiver (72), associated with said proximity control device (278) for activating said proximity control device in response to a signal emanating from said signal generator (278). See col. 12, ln. 44-col. 13.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 11-15, 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stegemoeller # 6,398,453 B1 in view of Yelton # 6,322,287 B1 and Malone # 5,752,783.

Stegemoeller discloses a drag box (15) capable of placing an asphalt mixture (16) on a surface. The drag box being adapted, to be coupled with a prime mover (10) such that said drag box is pulled over said surface (18). The drag box comprising:

A framework (30, 40) adapted to be pulled behind said prime mover. See Fig. 1. And  
further adapted to be coupled with said prime mover to accommodate floating vertical movement, independent of said prime mover.

A non-rigid connecting structure coupling the framework (30, 40) to the prime mover (10).

A device (52) coupled with said framework (30, 40) for distributing said asphalt mixture (16) over said surface (18).

At least one blade (24, 46), mounted on said framework (30, 40) and is capable of shearing asphalt said asphalt mixture (16), to form a substantially planar asphalt surface after said asphalt mixture (16) has been distributed over said surface.

See Fig. 1.

Wherein said at least one blade (24, 46) is movable in a vertical plane via hand jacks (54) "or other means for raising or lowering the strike-off assemblies (20) and (21)".

**Note laser receiver mounted above hand jack 54 on the right side and in the middle of framework in Fig. 2.**

What Stegemoeller does not disclose is what other "means for raising or lowering the strike-off assemblies are contemplated.

However, Yelton teaches it is known to provide drag boxes (10) with proximity control devices, in the form of linear actuators (13), connected between shoe (16) and a framework (14) for raising and lowering a strike-off blade (12). See col. 2, ln. 53-col. 3, ln. 38. Further, Malone teaches it is desirable to provide screeding devices (40) with an ultrasonic signal generator/receiver assembly (58, 56) for controlling the raising and lowering of a screed with respect to elevational changes in a base or previously paved surface. See Col. 3-col. 4, ln. 14. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the paving machine of Stegemoeller with linear actuators and ultrasonic elevation measuring devices, as taught by Yelton and Malone, in order to form a substantially smooth surface of paving material, regardless of changes in a base surface being paved.

In regards to claims 2-4, 8, 20 Stegemoeller discloses the prime mover (10) comprises a hopper and mixer (14) for dispensing asphalt mixture (16). As well as confinement ends in the form of skis, and at least one auger (52), that appears to be within 6" of at least one of said blades (24, 46).

In regards to claims 5-7, Stegemoeller discloses the proximity control devices could be of many well known devices, and illustrates a cylinder (54) in Fig. 2. What Stegemoeller does not disclose is the use of an automated system.

However, Malone teaches it is desirable to provide screeding devices (40) with an ultrasonic signal generator/receiver assemblies (58, 56) for controlling the raising and lowering of a screed with respect to elevational changes in a base or previously paved surface. See Col. 3-col. 4, ln. 14. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the paving machine of Stegemoeller with linear actuators and ultrasonic elevation measuring devices, as taught by Yelton and Malone, in order to form a substantially smooth surface of paving material, regardless of changes in a base surface being paved.

In regards to claims 11-15 Stegemoeller discloses the blade assemblies (24, 46) can be extended and retracted laterally, to increase or decrease the width of the paving material (16) being spread. See col. 4, lns. 15-68. What Stegemoeller does not disclose is the use of an automated blade control assembly. However, Yelton teaches it is known to provide drag boxes (10) with proximity control devices, in the form of linear actuators (13), in the form of electric and hydraulic cylinders for raising and lowering a strike-off blade (12). See col. 2, ln. 53-col. 3, ln. 38. Further, Malone teaches the signals received by the signal receivers are averaged to eliminate measurements that

are outside a desired range, and that the screed assembly is proportionally raised and lowered in response to measured elevational changes in the surface (16). And that the ultrasonic transmitter/receivers (58) can be coupled to the confinement ends, such that at least one sensor (58) is mounted to each end of the screed assembly, in order to control height and cross-slope of the screed assembly. See col. 3, Ins. 19-65.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the drag box assembly of Stegemoeller with the height/slope control as taught by Yelton and Malone, in order to automate functions of the drag box assembly that were previously manually controlled.

In regards to claims 19, 21 Stegemoeller discloses a distribution device (52) coupled with said framework, in the form of 2 dual auger assemblies (52) wherein left and right side augers of each assembly rotate in opposite directions. See Fig. 2; Although Stegemoeller does not explicitly recite a "pugmill"; the auger assembly cited above, appears to be identical to the distribution device disclosed by Applicant, and illustrated in Fig. 2 of the instant application.

In regards to claims 22, 26-30 Stegemoeller discloses a method of leveling a surface using a drag box comprised of a frame work (30, 40) adapted to be coupled with a prime mover.



A non-rigid connecting structure coupling the framework (30, 40) to the prime mover.

A distribution device, in the form of a dual auger assembly (52), coupled to said framework. At least one blade assembly (24, 46) mounted on said framework.

A proximity control device (54) mounted on said framework and coupled with said blade for raising and lowering said at least one blade assembly in a vertical plane independent of said prime mover. The method comprising:

Pulling said drag box (15) in a direction of travel.

Applying an asphalt mixture (16) to said surface (18) while said drag box is moving.

Distributing said asphalt mixture with said distribution device (52), which comprises at least one auger assembly (52).

Adjusting the height of said blade assemblies (24, 46) with said proximity control device (54), such that said blade assemblies are raised and lowered.

Leveling said asphalt mixture using said blade assemblies.

Stopping said drag box from moving in said direction of travel.

Moving said drag box in said direction of travel.

Maintaining substantially planar movement of said blade during said stopping and moving steps, by manually controlling the blade assemblies via proximity control devices (54), while said drag box is stopped.

Wherein said method is performed in a single pass.

Further wherein said surface (18) is a road surface, such as asphalt.

What Stegemoeller does not disclose is the method of instantaneously raising and lowering the blade assemblies, based on changes in the underlying surface being paved over. However, Stegemoeller does disclose that the proximity control devices may be hand jacks (54) or other commonly known raising and lowering devices.

Further, Yelton teaches it is known to provide drag boxes (10) with proximity control devices, in the form of linear actuators (13), connected between shoe (16) and a framework (14) for raising and lowering a strike-off blade (12). See col. 2, ln. 53-col. 3, ln. 38. Still further, Malone teaches it is desirable to provide screeding devices (40) with an ultrasonic signal generator/receiver assembly (58, 56) for controlling the raising and lowering of a screed with respect to elevational changes in a base or previously paved surface. See Col. 3-col. 4, ln. 14. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the method of paving a surface of Stegemoeller with the steps of providing and using linear actuators and ultrasonic elevation measuring devices, as taught by Yelton and Malone, in order to form a substantially smooth surface of paving material, regardless of changes in a base surface being paved.

In regards to claims 23, 24 Stegemoeller in view of Yelton disclose a method for leveling paving materials, using a drag box having a blade assembly and a proximity control device in the form of a cylinder. But does not disclose the steps of measuring the elevation of a surface and processing said signal using a signal receiver.

However, Malone teaches a method of using an ultrasonic distance measuring device to measure the elevation/altitude of the surface (18) and any changes therein and generating a signal representative of the elevation of the surface (18), and processing the signal generated, with a signal receiver (56) that controls movement of the proximity control device. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the method of leveling paving material, of Stegemoeller in view of Yelton, with the step of providing and using a signal generator and receiver assembly to measure the elevation of a surface to be paved, utilizing an ultrasonic distance measurer; as taught by Malone, in order to provide an automated system to control what was previously manually controlled. See Malone Col. 3-col. 4, ln. 14.

In regards to claim 25, Stegemoeller discloses the paving material may be aggregate, slurry or any material employed to surface a road or street. See col. 3, lns. 56-66.

4. Claims 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stegemoeller # 6,398,453 B1 in view of Yelton # 6,322,287 B1 and Malone # 5,752,783, as applied to Claim 1 above and further in view of Richter # 6,033,147.

Stegemoeller in view of Yelton and Malone discloses a sonically controlled paving machine, wherein the ultrasonic sensors can be calibrated to form a desired paving

thickness, for example 6". What Stegemoeller in view of Yelton and Malone do not disclose is the minimum thickness to which asphalt can be paved. However, Richter teaches that asphalt paved roadways often comprise multiple layers of varying thicknesses (d1, d2). Richter further teaches that each layer can vary between 2 cm and 8 cm forming a total pavement thickness between 8cm and 14cm. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use the paving machine of Banks in view of Ferguson et al., to form asphalt layers between 1-6", as taught by Richter, in order to meet required specifications for roadway layer thickness. See Richter Col. 1, Ins. 39-55.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mahoney et al. # 1,736,352 discloses a concave moldboard. WO 01/57320 A1 reference to Pont Feixes discloses a paving machine.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond W. Addie whose telephone number is 571 272-6986. The examiner can normally be reached on 6AM-2:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 571 272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**Raymond Addie**  
**Patent Examiner**  
**Group 3600**

11/21/05